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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

10/619,495

07/16/2003

Koji Nakamura

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09/30/2004

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EXAMINER

TIBBITS, PIA FLORENCE

ART UNIT

PAPER NUMBER

2838

DATE MAILED: 09/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/619,495

Applicant(s)

NAKAMURA, KOJI

Examiner

Pia F Tibbits

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/16/03, 3/31/04
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.
3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter: "a button which is operated even when the electronic device is OFF"; "user interface"; "charting". See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-4, 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Yoshida et al.** [hereinafter Yoshida][6674265].

Yoshida discloses an electronic device comprising a battery 10; control means 12 having a first mode/high capacity mode in which the battery is charged up to a fully charged state and a second mode/long life mode in which the battery is charged up to a state less charged than the fully charged state; means for detecting 30 that the battery is charged up to the fully charged state in the first mode; and means for switching control 18 of the control means from the first mode to the second mode when the battery 10 is detected to have charged up to the fully charged state [see also column 4, lines 21-36 and 52-59; column 7, lines 33-41].

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With regard to the patent using a battery temperature controller to control the battery charging process: eliminating the battery temperature controller, cited in the Yoshida reference, applicant neither extends the life of the batteries being charged, nor makes it easier to avoid a temperature-dependent irreversible deterioration of the battery. Therefore it would be obvious to one skilled in the art at the time the invention was made that the elimination of an element and its function in a combination is an obvious expedient if the remaining elements perform the same functions as before. See *In Re Karlson*, 136 USPQ 184 (CCPA 1963), *In Re Wilson*, 153 USPQ 740 (CCPA 1967), and *Ex Parte Rainu*, 168 USPQ 375 (PTO Bd. of App. 1969).

As to claim 2, as best as it can be understood at this time, Yoshida discloses a mode switch (not shown) provided on an instrument panel of the electric device that can selectively switch between the high capacity mode and the long life mode by manipulating the switch [see also column 4, lines 52-56].

As to claim 3, Yoshida discloses the button/mode switch attached to an instrument panel of the electric device.

As to claim 4, as best as it can be understood at this time, Yoshida discloses switching between the operation modes may be adequately conducted according to the utilization pattern of the electric device. For example, the battery 10 may be used in the long life mode on weekdays, and may be used in the high capacity mode on a holiday. In this way, the life of the battery 10 can be extended while making the most of the power thereof as required [see also column 5, lines 30-39].

As to claims 6 and 7, see remarks for claims 1-4 above.

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Yoshida**, as described above, in view of **Taylor et al.** [hereinafter Taylor][4333149].

Yoshida discloses an electronic device comprising a battery; control means having a first mode in which the battery is charged up to a fully charged state and a second mode in which the battery is charged up to a state less charged than the fully charged state; means for detecting that the battery is charged up to the fully charged state in the first mode; and means for switching control of the control means from the first mode to the second mode when the battery is detected to have charged up to the

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fully charged state. Yoshida does not disclose means for displaying a remaining amount of the battery, and in which the display means displays the remaining amount of the battery by using a charged state in the second mode as a reference.

Taylor discloses display 32 to indicate an accurate battery charge capacity in order to apprise user personnel of remaining battery charge at a location where battery charging can readily be accomplished. Therefore it would be desirable to display remaining battery charge in an analog fashion much the same way that the quantity of remaining fuel is displayed by conventional internal combustion engine vehicle fuel gauge [see also column 1, lines 22-42; column 3, lines 3-16]. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Yoshida's apparatus and include a SOC display, as disclosed by Taylor in order to apprise user personnel of remaining battery charge at a location where battery charging can readily be accomplished.

7. Claims 1-4, 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Saeki et al.** [hereinafter Saeki][6657415] in view of prior art disclosed by applicant, JP-200278222 [hereinafter JP].

Saeki discloses in figures 1-6b an electronic device comprising a battery 10; control means 22 having a first mode in which the battery is charged up to a fully charged state and a second mode in which the battery is charged up to a state less charged than the fully charged state; means for detecting 36 that the battery is charged up to the fully charged state in the first mode; and means for switching control of the control means from the first mode to the second mode when the battery is detected to have charged up to the fully charged state [see also the abstract; column 3, lines 1-4, and 9-14]. Saeki does not disclose switching from a first mode to the second mode.

JP discloses in the abstract a technique of switching from a mode in which the battery is fully charged, to a mode in which the battery is charged to a level that is lower than a fully charged level. A charging control circuit 3 has a voltage switching circuit 5 that changes setting voltage when lithium ion secondary battery 1 is judged to be in full charge. The control circuit operates a switching element 4 to control charging condition of the battery, according to the set voltage. In this manner discharge capacitance of the battery is increased, thereby increasing life span of the lithium ion secondary battery.

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Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Saeki's apparatus and include JP's teachings in order to increase the discharge capacitance of the battery, and to increase the life span of the lithium ion secondary battery.

As to claim 2, Saeki discloses in fig.2 a charging voltage switching operation unit 44 for externally compulsorily switching the charging voltage of the charging circuit 12 in response to a setting operation by the user. Through operation of, e.g., a switching button disposed on the hand-held apparatus, the charging voltage switching operation unit 44 provides as its output a charging voltage switching signal E5 which in turn is imparted as a charging voltage switching signal E6 via an OR circuit 46 to the charging circuit 12, whereby in this embodiment switching setting can be effected of either the **first charging voltage** $V_{c1}=4.2\text{V/cell}$ or the **second charging voltage** $V_{c2}=4.1\text{V/cell}$ [see also column 6, lines 64-67; column 7, lines 1-8].

As to claim 3, Saeki discloses the switching button disposed on the hand-held apparatus [see also column 7, lines 1-2].

As to claim 4, as best as it can be understood at this time, Saeki discloses a charging voltage switching operation unit 44 for externally compulsorily switching the charging voltage of the charging circuit 12 in response to a setting operation by the user [see also column 6, lines 64-67].

As to claims 6 and 7, see remarks for claims 1-4 above.

8. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Saeki** and **JP** in view of **Okumura et al.** [hereinafter Okumura][5717256].

Saeki and JP disclose an electronic device comprising a battery; control means having a first mode in which the battery is charged up to a fully charged state and a second mode in which the battery is charged up to a state less charged than the fully charged state; means for detecting that the battery is charged up to the fully charged state in the first mode; and means for switching control of the control means from the first mode to the second mode when the battery is detected to have charged up to the fully charged state. Saeki and JP do not disclose means for displaying a remaining amount of the battery,

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and in which the display means displays the remaining amount of the battery by using a charged state in the second mode as a reference.

Okumura discloses in fig. 16 shows a notebook type personal computer with a built-in power supply device includes a display part 33, and a remaining battery capacity display part 34 provided as part of the display 33. The display part 34 can display the remaining battery capacity as numerical values or by images. It can raise an alarm sound as a warning when the remaining battery capacity becomes small, or can turn on and off the display part 34 so as to attract the user's attention [see also column 12, lines 56-65]. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Saeki's and JP's apparatus, and include a remaining battery capacity display part, as disclosed by Okumura, in order to raise an alarm sound as a warning when the remaining battery capacity becomes small, or can turn on and off the display part 34 so as to attract the user's attention.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art cited in PTO-892 and not mentioned above disclose related apparatus.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Pia Tibbits whose telephone number is (571) 272-2086. If unavailable, contact the Supervisory Patent Examiner Mike Sherry whose telephone number is (571) 272-2084. The Technology Center Fax number is (703) 872-9306.

11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PFT

September 23, 2004

Pia Tibbits

Primary Patent Examiner

